contacting, wherein one or more ATCs hybridizes to more than one of said multiple P1 primers, wherein said conditions promote replication of said amplification target circle by extension of the P1 primers to form multiple tandem sequence DNA (TS-DNA) products and wherein said multiple deoxynucleoside triphosphates (dNTP) are selected from the group consisting of dTTP, dCTP, dATP, dGTP, dUTP, a naturally occurring dNTP different from the foregoing, an analog of a dNTP, and a dNTP having a universal base and wherein at least one nucleotide renders the TS-DNA resistant to nuclease activity following incorporation thereinto.

29. (Amended) The process of claim 1 wherein said at least one nucleotide is a phosphorothioate nucleotide.

Cancelled NE 30. (Amended) The process of claim 1 wherein said nuclease activity is due to an endonuclease.

31. (Amended) The process of claim 1 wherein said nuclease activity is due to an exonuclease.

Cancelled NE 34. (Amended) The process of claim 1 wherein said nuclease activity is due to a contaminating nuclease.

35. (Amended) The process of claim 1 wherein said at least one nucleotide is a modified nucleotide.

Cancelled NE 50. (Amended) The process of claim 49 wherein the 3'-terminal nucleotide of the primer can be removed by 3',5'-exonuclease activity.

56. (Amended) The process of claim 55 wherein said DNA polymerase is selected from the group consisting of DNA polymerases lacking a 3'-5' exonuclease activity, such as Taq, Tfl, and Tth DNA polymerase, Eukaryotic DNA polymerase alpha,